## What is claimed is:

1. A method for predicting values in a processor having a plurality of prediction modes, comprising:

receiving an instruction at a first table;

generating a valid signal from said first table;

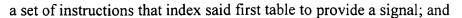
providing a prediction mode for said instruction;

determining a hit in a second table according to a function of said instruction and said first table; and

predicting a predicted value according to said hit and said prediction mode.

- 2. The method of claim 1, wherein said predicting includes selecting said predicted value from said first table.
- 3. The method of claim 1, wherein said predicting includes selecting said predicted value from said second table.
- 4. The method of claim 1, wherein said predicting includes selecting said predicted value from said first table or said second table according said hit in said second table.
- 5. The method of claim 1, wherein said generating includes matching a first table tag with said instruction.
- 6. The method of claim 5, wherein said generating further includes accessing an information field in said first table correlating to said first table tag.
- 7. The method of claim 1, further comprising placing said prediction mode in a shift mode.
- 8. The method of claim 1, further comprising placing said prediction mode in a count mode.
- 9. The method of claim 1, further comprising placing said prediction mode in a stride mode.

- 10. The method of claim 1, wherein said providing includes providing said prediction mode from said first table.
- 11. The method of claim 1, further comprising transitioning to said prediction mode from a previous prediction mode.
- 12. The method of claim 1, further comprising indexing said second table according to said function and a subset of said instruction.
- 13. A multi-mode predictor in a processor, comprising:
- a first table indexed by an instruction pointer and having table entries that includes a mode field and a information field;
- a second table indexed by a function of said instruction pointer and said first table; and a hit condition in said second table that correlates to a predicted value of a prediction mode.
- 14. The multi-mode predictor of claim 13, wherein said prediction mode is a shift mode.
- 15. The multi-mode predictor of claim 13, wherein said prediction mode is a count mode.
- 16. The multi-mode predictor of claim 13, wherein said prediction mode is a stride mode.
- 17. The multi-mode predictor of claim 13, wherein said first table provides said predicted value.
- 18. The multi-mode predictor of claim 13, wherein said second table provides said predicted value.
- 19. A processor, comprising:
- a multi-mode predictor comprising a first table and a second table, wherein said first table includes a plurality of entry fields and said second table includes a plurality of entry fields, and having a plurality of prediction modes;



a set of predicted values for said set of instructions, said set of predicted values stored in said first table and said second table.

- 20. The processor of claim 19, wherein said multi-mode predictor further comprises a function that indexes said second table according to said set of instructions and said first table entry fields.
- 21. The processor of claim 19, wherein said set of predicted values includes a first set of predicted values stored in said first table, and a second set of predicted values stored in said second table.
- 22. The processor of claim 21, further comprising a hit condition in said second table that accesses said second set of predicted values.
- 23. The processor of claim 21, further comprising a miss condition in said second table that accesses said first set of predicted values.
- 24. A multimode predictor, comprising:
- a first table, indexed by an instruction pointer and having first table entries, each having a mode field and a first prediction result field;
- a function unit having an input for instruction pointer data and coupled to said first prediction result fields of the first table entries, and having an output for a calculated pointer;
- a second table indexed by the calculated pointer and having second table entries having second prediction result fields; and
- a selector, having a control input coupled to the mode fields and data inputs coupled to the first and second prediction result fields.
- 25. The predictor of claim 24, wherein the first prediction result fields comprise a stride sub-field and a last value sub-field.

